

Remarks

Claims 9-11 have been added and claims 1, 4 and 8 been amended. These changes are fully supported in the specification. Claims 1-4 and 6-11 are now pending in this application. Claims 1-3 and 6-8 have been rejected under 35 U.S.C. § 103(a). Claim 4 has been rejected under 35 U.S.C. § 112, second paragraph. For at least the reasons stated below, Applicants assert that all claims are now in condition for allowance, and, therefore Applicants respectfully request the Examiner's reconsideration of this matter.

1. Claim 4 is now In Definite Form

The Examiner objected to claim 4 as "being indefinite for failing to particularly point out and distinctly claim the subject matter" of Applicants' invention because of the use of the "HALOPIN" trademark in the claim language. MPEP § 608.01(v) provides Examiners the authority to permit the use of trademarks in patent applications when the "product to which the trademark refers is set forth in such language that its identity is clear." Claim 4 has herein been amended to incorporate clear language identifying the socket characteristics of the product referred to by the trademark "HALOPIN." Light bulbs are identifiable by their socket designation. When one goes to the hardware store to replace a burned out light bulb, one searches for bulbs that match the socket type of the prior bulb. Thus, regardless of the brand that a bulb is marketed under, or the manufacturer of the bulb, a consumer uses the socket type to correctly find the proper bulb. The HALOPIN brand light bulbs of the present application have a G9 socket and will continue to do so even if the bulbs are marketed under a different brand. Applicants assert that the claim is not indefinite and is in form for allowance and request that the Examiner remove the objection.

2. 35 U.S.C. § 103 Rejections - The Prior Art Lacks All of Applicants' Claim Limitations

Claims 1-3 and 6-8 are rejected under 35 U.S.C. § 103 as being unpatentable over Lavy (US Patent 6,059,426) (hereinafter referred to as "Lavy") in view of Leen (US Patent 5,984,490) (hereinafter referred to as "Leen"). Because the combination of Lavy and Leen fails to teach or suggest all of the claim limitations, and because the results of Applicants' invention as claimed are unexpected in consideration of the prior art, Applicants respectfully object to these rejections.

Section 2143 of the MPEP provides in part that "to establish a prima facie case of obviousness ... the prior art reference ... must teach or suggest all the Claim limitations." (emphasis added). Because the cited references alone or in combination fail to teach or suggest all of the Claim limitations, Applicants respectfully request that the Examiner's §103 rejections be withdrawn.

A. The New Claims are Allowable

Applicants' invention is a lighting system that relies on multiple lower wattage halogen light bulbs so that a single bulb with a dangerously hot operating temperature is not needed. The series of light bulbs together provide wattage generally equivalent to a single high-watt halogen bulb. As now claimed in claims 9 and 10, one embodiment of the invention uses five 60-watt bulbs.

The Examiner has noted that Lavy does not disclose a plurality of halogen light bulb units, but that Leen discloses a double-bulb halogen lamp (Office Action, page 4). Neither of these references, alone or in combination, teach or suggest the collective use of five 60-watt light bulb units in a lighting system to achieve the desired intensity.

The Examiner states that Leen suggests the use of halogen bulbs falls between 150 watts to 500 watts (Office Action, page 5). Even accepting the Examiner's argument, Leen does not teach the use of 60 watt bulbs, as required in claims 9 and 10. Further, Lavy speaks of a "regular halogen bulb" for a torchère lighting system. One in the art recognizes that a "regular" halogen bulb for such lighting systems is a 300-watt bulb – not a 60-watt bulb since adequate light would not be provided by such a lighting system. Lavy is directed to protecting a "high temperature burning zone 50". A 60-watt bulb does not exhibit such a high temperature burning zone and so would not be considered a "regular" bulb as contemplated in Lavy. Therefore, the use of five 60-watt bulbs is not contemplated by Lavy or Leen (alone or in combination) and so Applicants request claims 9 and 10 be allowed.

B. Claims 1 and 8 are Allowable

1. Applicants' Invention Provides an Unexpected, Significant and Practical Advantage

The absence of a property that is expected based on teachings of the prior art is evidence of non-obviousness, *Ex Parte Mead Johnson & Co.*, 227 USPQ 78 (Bd. Pat. App. & Inter. 1985), particularly where this absence leads to unexpected results that are of a

significant, practical advantage, Ex parte The NutraSweet Co., 19 USPQ2d 1586 (Bd. Pat. App. & Inter. 1991). See also MPEP § 716.02(a).

Applicants were the first to recognize the advantage of creating a halogen-based torchère lamp with a plurality of lower-wattage, cooler burning halogen light bulb units. Since the introduction of halogen torchère lamps in 1983, fire-safety has been an issue in the forefront of the minds of those skilled in the art, as is evidenced by the inventions incorporating such safety measures as glass or wire guards or shields, tipover switches, and heat sensors. However, no invention, until the present invention, has addressed the fire-safety problem by attacking the heat source itself – the light bulb. Up until now, all inventions have addressed reducing the heat once it has been emitted from the heat source or preventing combustible materials from entering the high temperature burning zone, rather than reducing the internal heat of the lighting source itself.

Lavy discloses a halogen light that has a protective shield preventing obstacles from contacting the high temperature burn zone that is problematic in halogen lights. This is different than Applicants' invention that leverage a plurality of halogen light bulbs to eliminate the high temperature burn zone. On the other hand, Leen fails to identify the high temperature burn zone as a problem and utilizes multiple, regular 150 to 500 watt halogen bulbs to achieve variable light intensity. Based on the prior art, Applicants' use of multiple, smaller wattage halogen bulbs was not expected to eliminate the high temperature burn zone. As the total wattage of the light in Applicants' invention as claimed is the same as the total wattage of the lights in the prior art, the reduction in temperature was not expected. However, Applicants' invention proves that placement of multiple smaller wattage halogen bulbs evenly in a halogen torchère lamp results in the significant, practical advantage of eliminating high temperature burn zone.

The results produced by Applicants' invention have long been sought after by those skilled in the art, but up until Applicants' invention the results have been unrealized. As twenty years have passed since the introduction of the first halogen torchère lamps such an invention like Applicants' is therefore not obvious to one of ordinary skill in the art.

2. Applicants' Invention Uses a Plurality of Commonly Switched Bulbs

As amended, the Applicants' invention includes a switch for commonly switching the plurality of halogen light bulb units. Leen teaches away from the use of such a single switch

operating all of the halogen light bulb units. Leen provides for the independent switching of two halogen bulbs 21 and 23 using two switches 63 and 65 (col. 3, lines 9-10). According to Leen, "one switch controls the flow of current to one bulb and the other controls the flow of current to the other bulb, as shown in Fig. 3" (col. 3, lines 13-15). Wiring each switch to its own light bulb allows the Leen invention to "be used as a low- or high-intensity work light or floodlight, depending upon whether one or both of the switches 63 and 65 are closed" (col. 3, lines 59-61).

While Leen provides two light bulb units, they are configured independently each with their own switch to allow for varying light intensity. A user of the Leen invention can vary brightness by deciding whether to operate the light with the first light bulb 21 on and the second light bulb 23 off; with the first light bulb 21 off and the second light bulb 23 on; or with the first light bulb 21 on and the second light bulb on 23. If the teachings of Leen were extended to the lighting systems invented by the Applicants, the addition of each light bulb unit would require the addition of another switch. For example, in a 3 light bulb design, three switches would be needed according to Leen. The unfortunate user would need to choose from seven different ways to work the three switches in order to turn the lighting system on. In a 5 light bulb design, a user contemplated by Leen would have 31 choices for the switches. This is an entirely different use of multiple light bulb units than that contemplated by Applicants.

3. Applicants' Uniform Spaces of the Lamp Bulb Units Ensures Temperatures are below 500°F

Importantly, each of the light bulbs included in the present invention generates a top operating temperature that is well below the point that that would ignite a flammable material. Amendments to claim 1, require that the top operating temperature of each bulb "stays below a temperature that would ignite a flammable material" (see support in Application at page 5, lines 16-17). As is well known in the art, Underwriters Laboratories Standard #153 is used to certify torchère lighting systems in the industry. UL standard #153 addresses and defines cheesecloth as the test for whether a lighting system would ignite a flammable material. As further distinction, claim 11 states that the top operating temperature "remains below 500°F"

Lavy discloses a lamp head with an anti-combustion arrangement including a protective shelter for the protection of a halogen light bulb and air circulation and ventilation to further decrease the temperature at the surface of the shield. See Lavy, col 1, lines 11-

19; col. 2, lines 22-30. The protective shelter disclosed in *Lavy* may consist of glass with proper ventilation holes, wire frame, or wire netting gauze. See *Lavy*, col. 5, lines 34-44; col. 6, lines 14-22; col. 6, lines 58-64; col. 8, lines 4-10. *Lavy* further discloses the use of venting and air circulation, col. 2, lines 22-30, and heat sensors, col. 5, lines 13-27, to spread heat away from the high temperature burn zone created by one, "regular halogen bulb." *Lavy*, col. 1, lines 64-65. Unlike Applicants' invention, the objective behind *Lavy* is to add some element that dissipates the extreme high temperatures that a regular halogen bulb creates rather than treating the heat source itself. This is significantly different than Applicants' invention.

The Examiner states that *Levy* teaches that the halogen bulb and the shield are configured such that the temperature of the shield on a surface opposite the plurality of halogen bulbs stays below 500°F. Applicants disagree. *Levy* does not mention any specific requirement that the bulbs stay below 500°F. Furthermore, since *Levy* only teaches the use of a single halogen bulb, *Levy* does not contemplate how a plurality of light bulb units are configured among themselves as well as in connection with the shield to ensure that the operating temperature stays below 500°F.

Leen fails to disclose high temperature as a problem with halogen lights. While *Leen* provides two halogen bulbs 21 and 23, they are "located at the bottoms of the valleys, adjacent to the flat regions 54. Alternatively, the undulating portion of the reflector can be replaced with a single valley reflector, which may have a flat bottom, if desired" (col. 3, lines 4-8). *Leen* makes no provision on how a plurality of light bulb units should be "generally uniformly spaced within the housing" so as to ensure that "the temperature of the shield on a surface opposite the plurality of halogen bulbs stays below 500°F" or otherwise that the operating temperature "stays below a temperature that would ignite a flammable material". Therefore, *Leen* and *Levy* (alone or in combination) fail to teach the use of a single switch for the plurality of light bulb units as well as the uniform spacing of the light bulb units in order to ensure that the temperature stays below 500°F.

For the above indicated reasons, *Lavy* and *Leen*, alone or in combination, fail to teach or disclose all claim limitations in accordance with MPEP § 2143. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejections.

C. The Remaining Claims are Allowable

As the remaining claims are dependent on claims 1 or 8, these dependent claims are likewise in allowable form.

4. Conclusion

Applicants submit that all pending claims are allowable and respectfully request that a Notice of Allowance be issued in this case. In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at 612-607-7508. If any fees are due in connection with the filing of this paper, then the Commissioner is authorized to charge such fees including fees for any extension of time, to Deposit Account No. 50-1901 (Reference 13414-311).

Respectfully submitted,



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